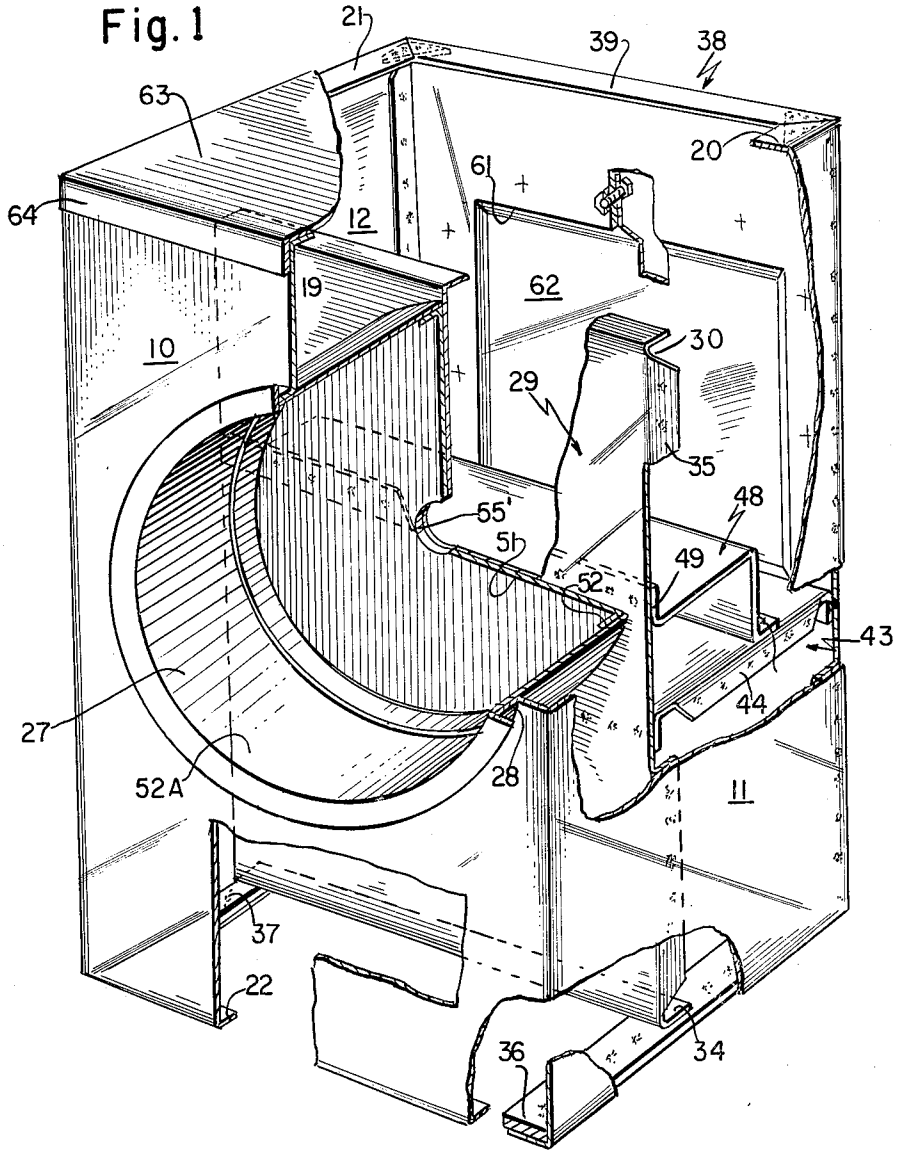
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LAUNDRY MACHINES

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Fig. 1



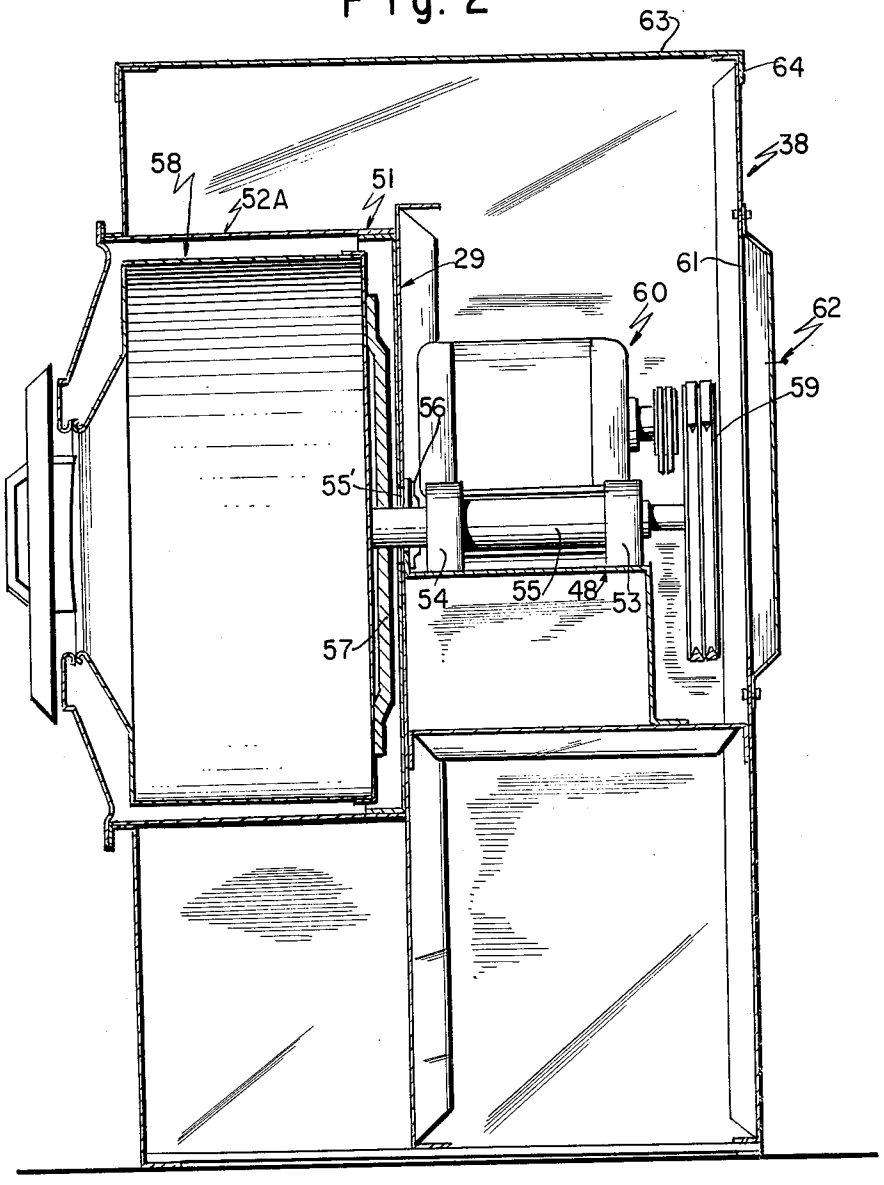
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Fig. 2



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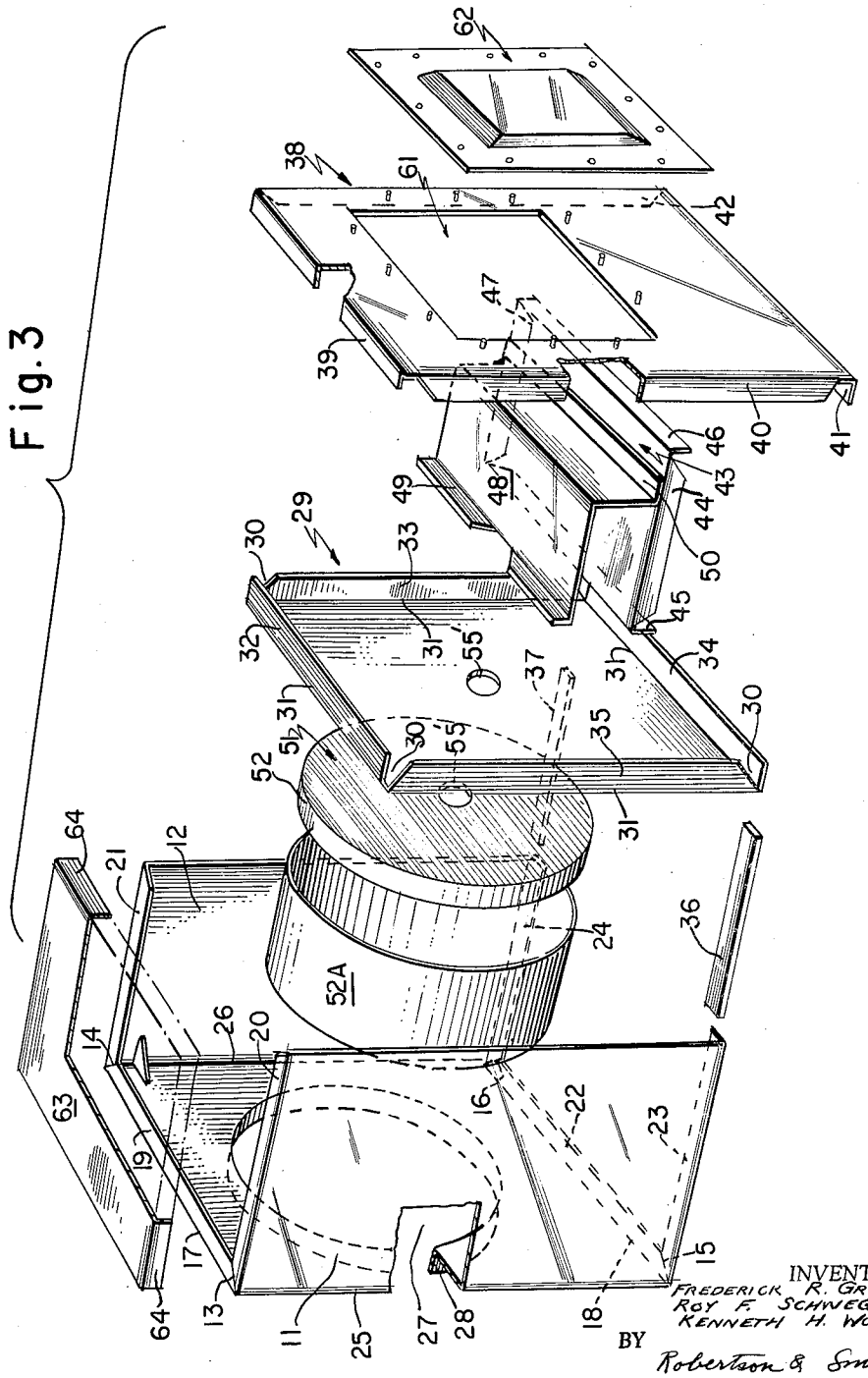
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Fig. 3



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LAUNDRY MACHINES

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9 Claims. (Cl. 312—228)

The present invention relates to laundry machines and particularly to an improved housing for laundry machines that is inexpensive to manufacture and still is of rugged construction.

Prior known commercial laundry machines require rigid, expensive structural frame members for absorbing the load incident to the operation of the rotatable basket and driving mechanism therefor, all of which elements are located within a housing that is separate from the frame members and incapable itself of absorbing the load incident to the operation of the machine. In laundry machines of substantial capacity, A-frame constructions are often relied upon to take the severe loads generated by the operation of the machine. These A-frames and other mounting means are a source of substantial cost in the manufacture of laundry machines which is out of proportion to the cost of other components of the machine.

The principal object of the present invention is to provide a housing or cabinet for a laundry machine that will itself absorb the loads incident to operation and still be of inexpensive construction.

Another object of the invention is to provide such a housing or cabinet which is made from sheet material and is designed in a manner to provide support for the rotatable basket and driving mechanism comparable to the rugged A-frame and other frame constructions.

Still another object of the invention is to provide such a housing or cabinet of monocoque construction.

In one aspect of the invention, the cabinet may comprise a front and two sidewall panels formed from a single sheet of material having its bottom and top edges provided with longitudinally spaced and transversely aligned V-notches, and bent along longitudinal lines passing through the apices of the spaced notches and also bent along lines passing through the transversely aligned notches, thus forming three sides of the cabinet.

In another aspect of the invention, a bulkhead panel may be made from a rectangular sheet of material having its corners notched to facilitate the bending of the four edges thereof to provide reinforcing flanges thereabout. The bulkhead panel may be located substantially midway of the sidewall panels and in parallel relation with the front panel, and its flanges may be spot welded or otherwise securely fastened to the two sidewall panels previously described, as well as to base bars located along the bottom flanges of the two sidewall panels.

In still another aspect of the invention, a flanged circular disc may be welded to the side of the bulkhead panel facing the front panel of the cabinet, and in concentric relation with a flanged circular opening in the front panel of the cabinet. A tubular element made from sheet material may extend between, and be welded to, the flange about the opening in the front panel and the flange about the disc attached to the bulkhead panel, thus forming a compartment within which the basket of the laundry machine can be mounted.

In still another aspect of the invention, a rear panel similar to the bulkhead panel may have its side flanges welded or otherwise securely attached to the sidewall panels at their free edges, thereby closing the cabinet or housing.

In still another aspect of the invention, a plate having edge flanges may be located at a substantial elevation above the bottom of the cabinet, extending horizontally between the bulkhead panel and the rear panel with its flanged edges welded or otherwise secured to the sidewall panels, the bulkhead panel and the rear panel adding structural rigidity to the cabinet.

In still another aspect of the invention, an angle member having longitudinal flanged edges may be welded to the bulkhead panel and the horizontal plate. It provides a support for bearings adapted to journal a shaft that may extend through a sealed passage in the bulkhead panel and to which the basket of the machine is attached, which basket rotates within the tubular element between the bulkhead panel and the front panel.

In still another aspect of the invention, a cover plate may be provided having a rectangular form and flanged edges adapted to fit over the top of the front, side and rear panels to close the cabinet or housing.

The above, other objects and novel features of the invention will become apparent from the following specification and accompanying drawings which are merely exemplary.

In the drawings:

FIG. 1 is a sectional perspective view of a cabinet or housing for a laundry machine to which the principles of the invention have been applied;

FIG. 2 is a sectional elevational view of the housing shown in FIG. 1 with the basket and driving means therefor shown mounted therein; and

FIG. 3 is an exploded perspective view of the components making up the cabinet shown in FIG. 1.

Referring to the drawings, the principles of the invention are shown as applied to a monocoque type of housing including a front and two side panels **10**, **11** and **12** made from a single sheet of material. The sheet of material may have V-notches **13** and **14** provided along its top edge and V-notches **15** and **16** along its bottom edge. The sheet is then bent along lines **17** and **18** to form flanges **19**, **20** and **21** along the top; and flanges **22**, **23** and **24** along the bottom edge. The sheet is again bent along lines **25** and **26**, forming the sidewall panels **11** and **12** parallel to each other and at right angles to the front panel **10**. A circular opening **27** is formed in the front panel **10** and it is surrounded by a flange **28** by spinning or otherwise.

A bulkhead panel **29** may be formed from a rectangular sheet of material having notches **30** at each corner and bent along lines **31** forming flanges **32**, **33**, **34** and **35**. The bulkhead panel **29** may be located substantially midway of the depth of the container and arranged parallel with front panel **10**. The flanges **33** and **35** may be spot welded to the sidewall panels **11** and **12**, and the flange **34** may be spot welded to base bars **36** and **37** that lie along, and are themselves welded to, flanges **23**, **24** of sidewall panels **11** and **12**.

A rear panel **38** may be formed from a rectangular piece of sheet material having notched corners and flanges **39**, **40**, **41** and **42**. The flanges **40** and **42** are spot welded to sidewall panels **11** and **12**, and the flange **41** is welded to the base bars **36** and **37**. A plate **43** having flanges **44**, **45**, **46** and **47** is mounted horizontally between bulkhead panel **29** and rear panel **38**. The flanges **44** and **47** are welded to sidewall panels **11** and **12**; flange **45** is welded to bulkhead panel **29**; and flange **46** is welded to rear panel **38**, forming a rigid structure. An angle **48** having flanges **49** and **50** is supported by plate **43**, flange **49** being welded or otherwise fastened to bulkhead panel **29** while flange **50** is welded to plate **43**.

A disc **51** having a peripheral flange **52** may be fixed to the side of bulkhead panel **29** opposite that which is attached to the angle **48**, and arranged concentric with

the opening 27 in front panel 10. A tubular element 52A may extend between and be supported by flanges 28 and 52 to which they are securely attached in sealing relation.

Referring to FIG. 2, aligned bearings 53 and 54 may be attached to the angle 48 for journaling a shaft 55 that extends through a hole 55' within bulkhead panel 29 and disc 51, about which a seal 56 is provided. Shaft 55 terminates within the tubular element 53 and at its terminus fixedly supports a disc 57 to which a conventional basket 58 is attached. The opposite end of shaft 55 supports a V-belt pulley 59 that is driven by a motor means 60 also mounted on angle 48.

The rear panel 38 may be provided with an opening 61 for access to the driving mechanism, and it may be closed by a removable cover 62 attached to the panel 38.

A top cover 63 may include flanges 64 on all four sides, adapted to receive the top edges of the front, sidewall and rear panels to effectively close the top of the cabinet.

Although the various features of the improved housing or cabinet for a laundry machine have been shown and described in detail to fully disclosed one embodiment of the invention, it will be evident that changes may be made in such details and certain features may be used without others without departing from the principles of the invention.

What is claimed is:

1. In a cabinet for a laundry machine, a front panel, an intermediate bulkhead panel and a rear panel, all arranged in parallel spaced relation; sidewall panels integrally attached to the edges of said panels; a horizontal plate extending between, and fixed to said bulkhead and rear panels at a substantial elevation above the bottom edges of said panels; an opening in said front panel; a tubular element secured to said opening at its one end and to said bulkhead panel at its other end, forming a basket receiving chamber within said cabinet; and an angle member rigidly attached to said bulkhead panel and said horizontal plate for supporting aligned bearings that journal a shaft extending through said bulkhead panel and terminating within said chamber.

2. In a cabinet for a laundry machine, a front panel, an intermediate bulkhead panel and a rear panel, all arranged in parallel spaced relation; sidewall panels integrally attached to the edges of said panels; a horizontal plate extending between, and fixed to said bulkhead and rear panels at a substantial elevation above the bottom edges of said panels; an opening in said front panel; flange means surrounding said opening; a flanged disc fixed to said bulkhead panel and arranged concentrically with said opening; a tubular element fixedly supported by said concentric flange means, forming a basket receiving chamber within said cabinet; and an angle member rigidly attached to said bulkhead panel and said horizontal plate for supporting aligned bearings that journal a shaft extending through said bulkhead panel and terminating within said chamber.

3. In a cabinet for a laundry machine, a front panel, an intermediate bulkhead panel and a rear panel, all arranged in parallel spaced relation; sidewall panels integrally attached to the edges of said panels; a horizontal plate extending between, and fixed to said bulkhead and rear panels at a substantial elevation above the bottom edges of said panels; an opening in said front panel; a tubular element secured to said opening at its one end and to said bulkhead panel at its other end, forming a basket receiving chamber within said cabinet; an angle member rigidly attached to said bulkhead panel and said horizontal plate for supporting aligned bearings that journal a shaft extending through said bulkhead panel and terminating within said chamber; an opening in said rear panel providing access to the space between said rear panel and said bulkhead panel; and a removable closure for the opening in said rear panel.

4. In a cabinet for a laundry machine, a front panel, an intermediate bulkhead panel and a rear panel, all arranged in parallel spaced relation; sidewall panels integrally attached to the edges of said panels; a horizontal plate extending between, and fixed to said bulkhead and rear panels at a substantial elevation above the bottom edges of said panels; an opening in said front panel; flange means surrounding said opening; a flanged disc fixed to said bulkhead panel and arranged concentrically with said opening; a tubular element fixedly supported by said concentric flange means, forming a basket receiving chamber within said cabinet; an angle member rigidly attached to said bulkhead panel and to said horizontal plate for supporting aligned bearings that journal a shaft extending through said bulkhead panel and terminating within said chamber; an opening in said rear panel providing access to the space between said rear panel and said bulkhead panel; and a removable closure for the opening in said rear panel.

5. In a cabinet for a laundry machine, a single sheet of material formed to provide a front panel integral with two sidewall panels, said sheet material having flange means formed along the top and bottom edges thereof; a flanged rear panel secured to said sidewall panels at their free ends opposite said front panel; a flanged bulkhead panel parallel to, and located between said front and rear panels, the flanges of said bulkhead panel being welded to the sidewall panels and to the flanges at the bottom of said sidewall panels; a flanged plate horizontally disposed between said bulkhead panel and said rear panel with its flanges welded thereto; an opening in said front panel; and a tubular element secured to said opening at its one end and to said bulkhead panel at its other end, forming a basket receiving chamber within said cabinet.

6. In a cabinet for a laundry machine, a single sheet of material formed to provide a front panel integral with two sidewall panels, said sheet material having flange means formed along the top and bottom edges thereof; a flanged rear panel secured to said sidewall panels at their free ends opposite said front panel; a flanged bulkhead panel parallel to, and located between said front and rear panels, the flanges of said bulkhead panel being welded to the sidewall panels and to the flanges at the bottom of said sidewall panels; a flanged plate horizontally disposed between said bulkhead panel and said rear panel with its flanges welded thereto; an opening in said front panel; flange means surrounding said opening; a flanged disc fixed to said bulkhead panel and arranged concentrically with said opening; a tubular element fixedly supported by said concentric flange means, forming a basket receiving chamber within said cabinet; and an angle member rigidly attached to said bulkhead panel and to said horizontal plate for supporting aligned bearings that journal a shaft extending through said bulkhead panel and terminating within said chamber.

7. In a cabinet for a laundry machine, a single sheet of material formed to provide a front panel integral with two sidewall panels, said sheet material having flange means formed along the top and bottom edges thereof; a flanged rear panel secured to said sidewall panels at their free ends opposite said front panel; a flanged bulkhead panel parallel to, and located between said front and rear panels, the flanges of said bulkhead panel being welded to the sidewall panels and to the flanges at the bottom of said sidewall panels; a flanged plate horizontally disposed between said bulkhead panel and said rear panel with its flanges welded thereto; an opening in said front panel; a tubular element secured to said opening at its one end and to said bulkhead panel at its other end, forming a basket receiving chamber within said cabinet; an opening in said rear panel providing access to the space between said rear panel and said bulkhead panel; and a removable closure for the opening in said rear panel.

8. In a cabinet for a laundry machine, a single sheet of material formed to provide a front panel integral with two sidewall panels, said sheet material having flange

means formed along the top and bottom edges thereof; a flanged rear panel secured to said sidewall panels at their free ends opposite said front panel; a flanged bulkhead panel parallel to, and located between said front and rear panels, the flanges of said bulkhead panel being welded to the sidewall panels and to the flanges at the bottom of said sidewall panels; a flanged plate horizontally disposed between said bulkhead panel and said rear panel with its flanges welded thereto; an opening in said front panel; flange means surrounding said opening; a flanged disc fixed to said bulkhead panel and arranged concentrically with said opening; a tubular element fixedly supported by said concentric flange means, forming a basket receiving chamber within said cabinet; an angle member rigidly attached to said bulkhead panel and to said horizontal plate for supporting aligned bearings that journal a shaft extending through said bulkhead panel and terminating within said chamber; an opening in said rear panel providing access to the space between said rear panel and said bulkhead panel; and a removable closure for the opening in said rear panel.

9. In a rigid monocoque cabinet for a laundry machine, a front panel, an intermediate bulkhead panel and a rear panel, all arranged in parallel spaced relation; sidewall panels integrally attached to the edges of said panels;

horizontal plate means extending between, and fixed to said bulkhead and rear panels at a substantial elevation above the bottom edges of said panels; an opening in said front panel for receiving a door; a tubular element secured to said opening at its one end and integrally secured to said bulkhead panel at its other end, forming a basket receiving chamber within said cabinet; and means supported by said horizontal plate for carrying bearing means for a basket shaft, said shaft extending through said bulkhead panel and terminating within said chamber for carrying a basket.

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